ABSTRACT OF THE DISCLOSURE

A system and method for selectively checkpointing application components. In one embodiment this method may include deploying a plurality of application components on a server, determining checkpoint information for each application component on the server, and selectively checkpointing each component during execution of each component according to the checkpoint information for each component. In one embodiment the checkpoint information may be provided by a checkpoint selection heuristic, which makes checkpoint selections based on a description of one or more methods of the application component. In one embodiment the checkpoint information may be provided by a deployment descriptor, which may have multiple overriding tiers to facilitate precise selection of methods, components and modules for checkpointing. In one embodiment the checkpoint and activation process may include callback routines which prepare an application component for checkpointing and activation.